

# AI Planning

## Exercise Sheet 4

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### Exercise 4.1

For easy readability let the tiles be referred to as  $b_1$ ,  $b_2$ ,  $w_1$  and  $w_2$  and the empty cell be referred to as  $e$ . Furthermore, let the actions move and jump be denoted as  $m_c(t)$  and  $j_c(t)$  respectively where  $c$  is the destination cell  $\in \{1, 2, 3, 4, 5\}$  and  $t$  is the tile that is being relocated.

As an example, the initial state is:

$b_1, b_2, w_1, w_2, e$

If we then apply  $j_5(b_2)$  we reach:

$b_1, e, w_1, w_2, b_2$

(a)

(b)

### Exercise 4.2

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